

hcm NEWS 3/2020



Ana Caraiani

received
EMS Prizes

Maryna Viazovska

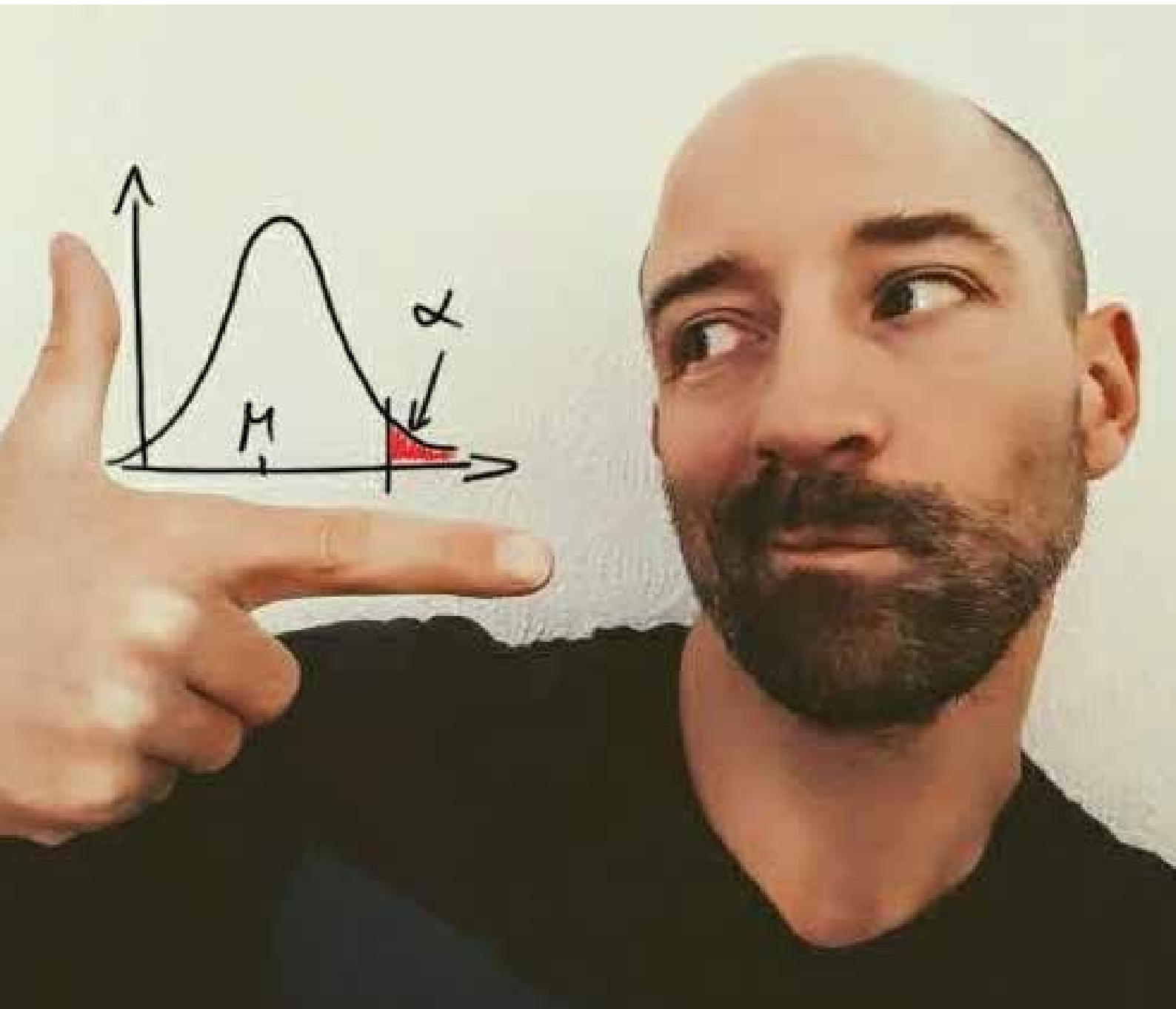
Due to the corona pandemic, the 8th European Congress of Mathematics, planned for this year, has unfortunately been cancelled and has been postponed to June 2021. Nevertheless, the winners of the prestigious awards have already been announced. From the perspective of Bonn, it is particularly pleasing that two of the 10 winners of the EMS Prize have strong ties to the Hausdorff Center. The prizes are awarded to young researchers not older than 35 years at the time of nomination, of European nationality or working in Europe, in recognition of excellent contributions in mathematics.

Ana Caraiani was a Bonn Junior Fellow at the Hausdorff Center in 2016/17 and is still being strongly connected with our cluster. In 2018, she was appointed a Bonn Research Fellow. In 2007, the Association for Women in Mathematics granted Caraiani the Alice T. Schafer Prize for excellence in mathematics. She was also one of the winners of the Whitehead Prize of the London Mathematical Society in 2018, and was elected as a Fellow of the American Mathematical Society in the Class of 2020, for "contributions to arithmetic geometry and number theory, in particular the p-adic Langlands program". Ana Caraiani is currently a Royal Society

University Research Fellow and Reader at Imperial College London.

Maryna Viazovska was a PhD student at the Bonn International Graduate School of Mathematics (BIGS) and received her PhD in 2013 under the supervision of Don Zagier and Werner Müller. In 2016, Viazovska solved the sphere-packing problem in dimension 8 and, in collaboration with others, in dimension 24. Viazovska was an invited speaker at the International Congress of Mathematicians 2018. She is the recipient of numerous awards: In 2016, she received the Salem Prize and, in 2017, the Clay Research Award and the SASTRA Ramanujan Prize for her work on sphere packing and modular forms. She has also been awarded a 2018 New Horizons Prize in Mathematics, and, in 2019, the Ruth Lyttle Satter Prize in Mathematics and the Fermat Prize. She is currently a professor at the École Polytechnique Fédérale de Lausanne (EPFL).

Congratulations!



Dominik Liebl in the Focus of Media Attention

In May, HCM member Dominik Liebl found himself suddenly and unintentionally to be in the focus of media attention and received countless requests from newspapers and TV stations. The reason: Liebl had, how it is common in the scientific world and how many colleagues had also done, criticised the statistic method used in a study by the team of the Berlin virologist Christian Drosten on a preprint server. The critic was first spread on Twitter and was then among others for publicity immensely shortened cited by the newspaper BILD. At that time we purposely decided not to report this, because the debate was lead irrationally and was made personal. In retrospect, Stefan Hartman and Dominik Liebl discussed what exactly happened and what the main critic actually was. You can read the interview [here](#) in German.

HAUSDORFF EVENTS

Hausdorff Events during Times of Corona

Numerous events, for example the lecture series about “Mathematics and Music” planned for the Beethoven anniversary, had to be cancelled due to the pandemic. We developed many virtual replacements:

Virtual Bonn Maths Circle

Already on the 28th March the first Zoom meeting for the now virtual Bonn Math Circle took place. This was one of the first extracurricular online activities at German universities, that arose from the pandemic. Every Saturday at 2pm, 10 - 15 children and adolescents from grade 6 onwards, who are particularly interested in mathematics, are logging on to join the two to three hour long workshop. One of the first hours was attended by a freelance journalist, Maike Walbroel, who had studied to become a math teacher some years ago. She wrote a detailed report about the event in “Bonner General-Anzeiger”. Another report can be found on the website of the University of Bonn in the rubric “Lebenszeichen”.

Carsten Burstedde’s Live Online Concert

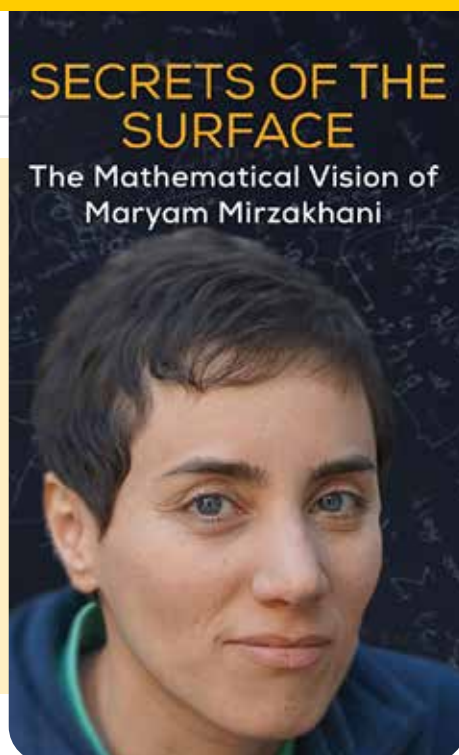
Carsten Burstedde thought of a very special experiment since his public lecture “Mathematics in electro Music” (“Mathematik in der elektronische Musik”) for pupils sadly had to be cancelled. He hosted as DJ “Doc B Grover” an electronic online concert which he streamed live over Twitch. With this he definitely takes a top position in the unofficial category “coolest Math professor ever” – at least according to the virtually present, mostly young audience...



HAUSDORFF EVENTS

“International Women in Mathematics Day”

On the 12th May the “International Women in Mathematics Day” was celebrated worldwide for the second time. This date is the birthday of Iranian Maryam Mirzakhani, the only woman to be honored by the Fields Medal so far. Mirzakhani died of cancer in 2017 at the age of 40. On the “International Women in Mathematics Day” we had the great opportunity to watch the new movie “Secrets of the Surface” about Maryam’s life and mathematical work. Through a Zoom screen sharing, we watched the sensible documentation and exchanged our impressions afterwards. 30-40 members of Bonn mathematics, including scientific guests at the MPIM, participated. It was a moving moment for all of us!



Virtual Bonn Math Night

The 12th Bonn science night including the science tent which was originally planned for the 29th May had to be – as so many other events were as well – cancelled, because of the Corona pandemic. On this day, we, however, created a night of mathematics, in cooperation with the University of Bonn, the City of Bonn and the DFG. At 3pm the event started with mathematical workshops, hosted by Stefan Hartmann and his school team. The topics ranged from an introduction to game theory over mathematical handcraft and cryptography to the “majestic tandem” consisting of Chess and Mathematics. From 7pm until late in the night, the event continued with lectures for everyone. Speakers were Thoralf

Räsch, Wolfgang Lück, Valentin Blomer, Jan Hasenauer and Rainer Kaenders – a “colourful” mix of pure and applied mathematics with a lot of self reflection and philosophical contemplation. About 150 people participated in total with a maximum of 80 attendants at 8pm. The exact program can be reread [here](#). Due to the extremely positive feedback we want to repeat this format in November – together with the Münster Cluster. Colleagues from the Münster Cluster watched and afterwards contacted us regarding a cooperation. Additionally, together with the school team – on top of the virtual Bonn Math Circle – we will offer more virtual mathematics workshops for a wider audience in the near future.

HAUSDORFF MIXED

We inspired our HCM
YouTube Channel through
two gripping series:



Matthias Kreck

has been accompanied laymen interested in mathematics with his video series “Mathematics for everyone – during times of corona” (“Mathematik für alle – in Zeiten von Corona”) for many weeks and wants to convince them of the beauty of mathematics. In his entertaining series, he demonstrates what mathematics constitutes and that proofs are not magic. Matthias Kreck provides some elementary mathematical proofs in detail and gently takes his audience with him. In further episodes he also speaks critically about the borders of mathematical methods, for example modelling a pandemic. The newspaper “Süddeutsche Zeitung” shortly reports about this. [Here](#) is the link to the video series. Feel free to drop in!



Thoralf Räsch

For many years, Thoralf Räsch has been our flagship for public representation of Bonn mathematics, especially in schools. Now he uses the time to establish new video formats which are mostly, but not exclusively, intended for pupils and students. Here he entertainingly and “in small bites” conveys topics related to logic. His series “Three Minutes Fun with Logic & Co.” (“Drei Minuten Spaß mit Logik & Co.”) can be found [here](#).



A Big Success at the Girl's Olympiade

Similarly to last year, the HCM supported the German girl team at the European Girls' Mathematics Olympiad (EGMO), whose ninth edition took place virtually this year. From the four German participants Maria Matthis (18) from Lübeck, achieved the best result and won a silver medal. The other three pupils from the German team won bronze: Xenia Wagner (17, Landsberg im Saalekreis), Martha Friederich (16, Bad Homburg) and Sofia Zotova (18, Hamburg). The most successful participant of the tournament was the 17-year-old Amina Abu Shanab from Romania. In total, 200 pupils from 53 countries competed.

HAUSDORFF MIXED



Corona School

Already in the middle of March, Christopher Reiners, Bonn mathematics student, together with three university colleagues: Gero Embser, Lukas Pin und Tobias Bork, established the "Corona School". On the website www.corona-school.de the students offer voluntary free digital tutoring 1-on-1. Already after four weeks, more than 6500 pupils and 5500 students from all over Germany had registered with Corona School and the numbers are increasing daily. Now a dedicated team of more than 100 students work as volunteers on this project up to 14 hours per day. The coordination and organisation is mainly done by eight students. Not only was this great idea created by math students from Bonn, but the core team mainly consists of Bonn students as well. Tobias Beck was invited to be a guest at the talkshow "NDR Talkshow" where he presented the idea of the "Corona School". In various news programs and newspaper articles, for example in the "FAZ", it was reported about the "Corona School" in detail. We are very proud to have such dedicated and active students in Bonn!

Last, but not least...

Our former doctoral student and postdoc, Giacomo di Gesu, has taken up a position in Pisa. Congratulations! From there he sent us some wonderful photos of his son Ettore in the Parent- Child- Office at the HIM. There, Giacomo took part in the JTP "Randomness, PDEs and Nonlinear Fluctuations" in the end of the last year. An elegant presentation at the blackboard needs to be practiced early!



IMPRINT

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